Landowner: _____

Address: _____ Field No. _____

Designed by: _____ Date: _____ Checked By: _____

HAZARD CLASSIFICATION
CHECK FACTORS WHICH APPLY TO THIS DAM

_____	Located in rural area.
_____	Effective height 35 feet or less.
_____	Height x storage less than 3000.
_____	Downstream development limited to farm buildings, farmland, township, county or supplementary state roads.
_____	Little or no potential for future downstream development.
_____	Downstream valley is as wide or wider than at dam site.
_____	Hazard classification is class (a).

Signature _____ Date: _____

DESIGN PROCEDURES [1/]

Drainage Area: _____ Acres

1. For Drainage Area 10 acres or less:
Emergency spillway bottom width = 10 ft.
Emergency spillway depth = 1.0 ft. flow depth + 1.0 ft. freeboard = 2 ft.

2. For Drainage Area 11-20 acres:

Circle appropriate data in Tables A thru E and multiply factors in spaces provided below:

Table A	
10 Yr/24 Hr Rainfall	Factor
5.0"	1.9
5.2"	2
5.4"	2.1
5.6"	2.4
5.8"	2.5

Table B	
RCN	Factor
60	0.5
65	0.8
70	1
75	1.3
80	1.5
85	2

Table C	
Watershed Slope	Factor
0-3%	0.7
3-8%	1
8+	1.3

Table D	
Storage Ratio	Factor
10	0.4
15	0.6
20	0.7
30	0.8
40 or more	0.9

Table E	
Aux. Spwy. Flow Depth	Factor
0.5'	1.3
1.0'	0.44
1.2'	0.33
1.5'	0.22

Storage Ratio: Drainage Area / Pool Area = ( ) / ( )

= _____
Round to nearest ratio shown in Table D

Auxiliary Spillway Bottom Width = _____ x _____ x _____ x _____ x _____ x _____
Drainage Area (20 Acre Max) | Table A Factor | Table B Factor | Table C Factor | Table D Factor | Table E Factor

= 0.00 Ft.; Use _____ Ft.
(10 Ft. Min.)

Auxiliary Spillway Depth = _____ + 1.0 Ft. Freeboard = _____ Ft.
Flow Depth (From Table E)

1/ This design procedure is limited to Class A hazard ponds with drainage area 20 acres or less, effective height 20 feet or less, total height less than 35 feet, no pipe spillway, "Fair" or "Good" auxiliary spillway condition, and 1 to 10% auxiliary spillway exit slope. Trickle tubes may be used. Use Form MO-ENG-40 or Pond Program for larger ponds and structures.

LAYOUT

Landowner _____

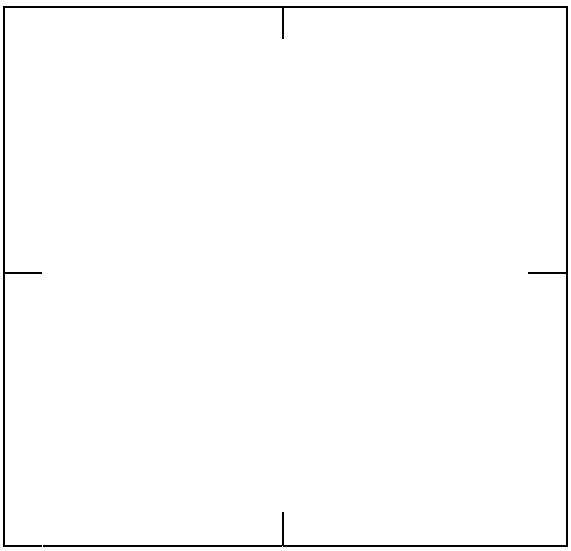
Surveyed by _____ Date _____

Station	B.S.	H.I.	F.S. or grade rod	Top of Dam Elev.	Settled fill ht	Settlement	Slope stakes and remarks

Dam: Elev. Settled Fill: _____ TW: _____ ft. Side slopes: US: _____ DS: _____

Auxiliary Spillway: Crest Elev. _____ Width _____ ft.

_____ % allowed for settlement Staked for ☐(settled) ☐(unsettled) fill height



Sec._____
T._____
R._____